

**Active Gem Mining at the Cryo Genie Pegmatite Mine, southern California; Report  
#1, August 26, 2002  
Jim Clanin, JC Mining**

**Editor's note**

*The following report from Jim Clanin (JC Mining, El Cajon, California) cites recent mining developments at the Cryo Genie pegmatite gem mine near Warner Springs, California. Jim has agreed to post regular updates on the progress of mining through the end of summer and fall of 2002. Last year, mining in this pegmatite produced some of the largest and finest pink tourmaline crystals on record from southern California (Figure 1).*

*The mining of gem-bearing pegmatites is normally a quite secretive affair, but Clanin and co-workers have agreed to let the PIGs wallow (virtually) in the mine as it is blasted and mucked out. These reports provide a rare opportunity to “see” through the miners’ eyes how prospecting and assessment for gem potential pays off as the miners work their way through the pegmatite. The Cryo Genie is not yet mapped underground, so readers will need to visualize much from the verbal descriptions. Photos of specific locations in the mine will be provided as available.*

*– David London*

Greetings from East San Diego County, California.

We are now into our 4th week of our second season of mining at the Cryo Genie Mine in San Diego County. The mining crew this year is comprised of David Kalamas, Ken and Dana Gochenour and myself, Jim Clanin (Figures 2, 3). This year we hope to top our fabulous pink tourmaline pocket from last year's effort and open new producing areas in the pegmatite (Figure 1).

Last year, with the help of John Klenke, I developed the mine underground down dip to where I believed a roll in the pegmatite existed. The roll was where I expected and I then developed a crosscut tunnel to the north and south. The northern face of our decline had a large quartz pocket showing and we decided to do most of our development work to the north. After driving the northern tunnel 4 meters, the geology indicated that we should start a raise, and that's when we opened the largest pocket produced at the mine to date. It was 4 by 3 meters and had quartz crystals up to 10 kgs each. These were once part of

quartz clusters that had come crashing down from the ceiling of the pocket, crushing everything below them and shattering the clusters – such a large pocket and not much of anything of value. The pocket also had colored tourmaline pencils, or I should say pencil leads. The mostly blue-green crystals were, at their largest, about 5 mm in diameter and 20 mm long and there were thousands of them. The pocket also had something I've never seen in my more than 20 years of mining in the county: massive pink and green tourmaline, one piece was over 2 kgs in weight. Other minerals include aquamarine and cassiterite as well as the typical suite of feldspar minerals.

After finishing the pocket we pushed to join the upper workings. During that effort we found a basketball-size pocket of pink tourmaline up against a plunge in the pegmatite. Unfortunately, all of the tourmaline was about the same size as the last pocket of blue-green tourmaline. This time, however, there was a mineral stream heading north along the upper plunge and after about 2 meters we hit the Fabulous Pink Pocket, one of the most exciting and memorable mining moments of my life and it has been said that this was the best pink tourmaline pocket to be found in nearly one hundred years in San Diego County. (Figure 1). With that find we ended last year's mining season.

This year, for the last few weeks, we have been pushing the lower northern crosscut to find the lower portion of the pink pocket mineral zone. The predictability of pegmatites is dubious at best but the signs are easily followed. One of the reasons I quit driving tunnel north in this lower crosscut last year was because the line rock began to rise and the core immediately above became fine grained. That is when we decided to follow the coarse core zone up dip and finally found the fabulous pink pocket. It looks as if there are mineral zones raking to the north, running at a diagonal to the dip. The structure of the Cryo Genie Mine is on a small enough scale to be able to somewhat predict the pocket areas.

I thought the line rock would fall as we got closer to the next mineral stream bulge, as it did in the upper crosscut, but for about 4 meters it kept rising. The signs improved however, with lepidolite and montebrasite showing up near the ceiling. Right after that we found our first pocket, about the size of a grapefruit. After digging several of these satellite pockets with nothing in them except quartz, we hit our first significant pocket that contained several pencil-size pink and green tourmaline crystals. Several large matrix pieces of nice cleavelandite and quartz came out, but we won't know if there are any tourmalines on these specimens until we clean the material with a water gun till. The pocket appears to be continuing up dip, and further blasting is needed to gain access. That's where we stand as of today.

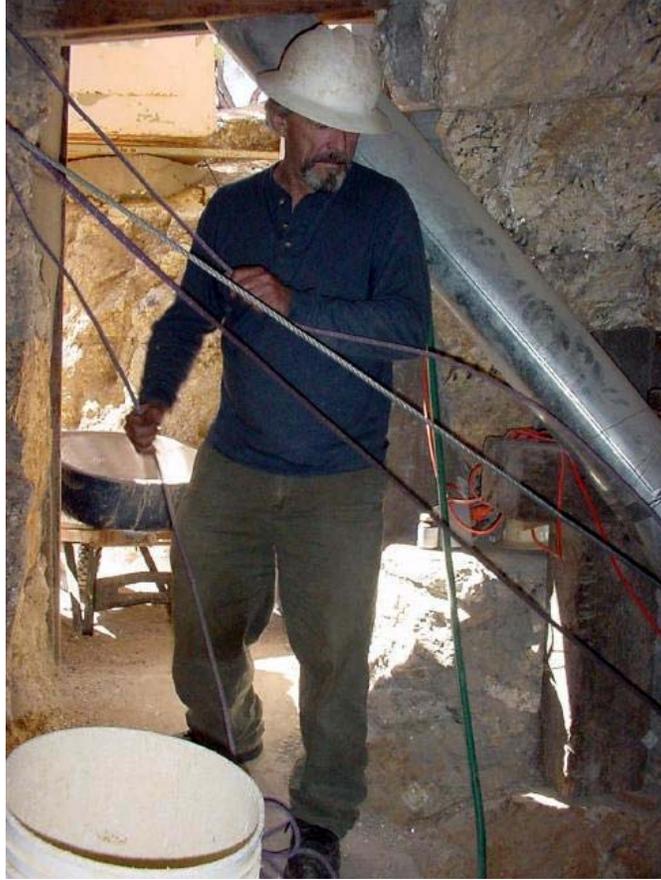
During this last week of August we intend to follow the core up dip to evidentially tie in to the upper crosscut. I'll keep everyone posted on the progress and what we find.

Till then, have happy tourmaline thoughts.

Jim”



**Figure 1.** Tourmaline crystals obtained from mining at the Cryo Genie pegmatite in 2001, on display at the 2002 Tucson Gem & Mineral Show.



**Figure 2.** Ken Gochenour, pulling up buckets from the crosscut at the roll, the current method of removing the muck from the 35 foot deep decline.



**Figure 3.** Jim Clanin, standing at the loading station at the loading station in front of the “roll” found along the decline that was sunk in 2001. “Where I am standing was the beginning of the big quartz pocket, the corner of which we hit in the main decline and eventually dug in the raise. I am facing east, we are currently working to the North - left of me. I believe our current face is about 30 feet north of where I’m standing in the picture.”